

REMARKS

Claims 1-32 are pending.

Claims 1-4, 11-14, 17-21, 24, 27, and 30-32 have been withdrawn.

Claim 8 has been amended to remove recitation to particular named antibodies and include limitations to the claimed antibody.

Support for the amendment to claim 8 can be found in the specification at page 13, lines 27-31 and lines 35-37 and continued on page 14, line 1, and at page 25, lines 14-17 and Table 3 (range of claimed dissociation constant (K_d) and exemplary K_d measured: 10^{-6} M through 10^{-13} M; 3.3×10^{-9} M, 8.0×10^{-8} M).

Support for the amendments to Tables 1 and 2 is to be found in the Sequence Listing and Specification as filed.

Support for the amendments to Figure 5 is to be found in the Sequence Listing as filed.

DETAILED ACTION

Election/Restriction

1) The Examiner noted that upon reconsideration, the Examiner has extended the search to cover all the species of Group II.

Applicants thank the Examiner for reconsideration and extending the search to cover all the species of Group II.

Applicants respectfully submit that, as stated in the Response filed 18th December, 2010, claims 12, 14, 31, and 32 (Group V) are drawn to a process of using the products of claims 5-10, 15-16, 22-23, 25-26, and 28-19 (Group II).

Applicants respectfully submit that, upon allowance of the claims to the above products, the process for making and using same, i.e., the claims of Groups I, II, and III, must be rejoined. See the Commissioner's Notice in the Official Gazette of March 26, 1996, entitled "Guidance on Treatment of Product and Process Claims in light of In re Ochiai, In re Brouwer and 35 U.S.C. § 103(b)" which sets

forth the rules, upon allowance of product claims, for rejoinder of process claims covering the same scope of products. Thus, Applicants respectfully request, upon allowance of product claims, reconsideration of the Restriction Requirement and examination of Group II, claims 5-10, 15-16, 22-23, 25-26, and 28-19, and Group V, claims 12, 14, 31, and 32.

Objections to the Specification under 37 CFR 1.182(d)

1) The Examiner has objected to the specification for failing to provide a sequence identifier for each individual sequence. The Examiner stated that Figures 4 and 5, on page 7, Table 1, page 32, and Table 2, page 33 have described amino acid sequences that each must have a sequence identifier and that correction is required.

Applicants submit that the specification at page 7, wherein the brief descriptions of Figure 4 and Figure 5 are disclosed, do not disclose a peptide comprising at least four amino acids; therefore Applicants submit that there are no amino acids sequences to be identified as required by 37 CFR 1.821(a) (see also MPEP 2422). In addition, Figure 4 does not disclose any peptides comprising at least four amino acids.

Applicants have amended Figure 5 to comply with 37 CFR 1.182(d).

Applicants have amended Tables 1 and 2 to comply with 37 CFR 1.182(d). Applicants have also submitted a new Sequence Listing that includes the amino acid residue sequences disclosed on Table 2. Applicants respectfully request that the Examiner withdraw the objections to the Specification.

Claim Rejections under 35 USC § 112

2) The Examiner has rejected claims 8 and 10 under 35 USC § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

The Examiner stated that Claim 8 is indefinite in the recitation of “RAD3, RAD4, RAD9, RAD11, RAD12, RAD32, RAD34, RAD87, or RAD88” because its characteristics are not known. The use of “RAD3, RAD4, RAD9, RAD11, RAD12, RAD32, RAD34, RAD87, or RAD88” monoclonal antibody as the sole means of identifying the claimed antibody and hybridoma renders the claim indefinite because “RAD3, RAD4, RAD9, RAD11, RAD12, RAD32, RAD34, RAD87, or RAD88” is merely a

laboratory designation which does not clearly define the claimed product, since different laboratories may use the same laboratory designations to define completely distinct hybridomas or cell lines. The Examiner suggested that Accession Number be cited in the claims.

The Examiner stated that the recitation of “having the immunoreactivity of the antibody of claim 8” in claim 10 is indefinite because it is well known in the art that every antiserum has a different specificity because the repertoire of antibodies produced by animal is somewhat different. Thus, the Examiner continued, it is unclear how one of skill in the art would be able to make an antibody with the equivalent immunoreactivity of the RAD3, RAD4, RAD9, RAD11, RAD12, RAD32, RAD34, RAD87, or RAD88 antibody.

Applicants have amended claim 8 to recite: “The antibody of claim 5 having immunoreactivity with integrin $\alpha_{IIB}\beta_3$ wherein the antibody has a dissociation constant (K_d) from between 10^{-8} M and 10^{-11} M”.

In response to the Examiner’s rejections, with regard to claim 8, Applicants respectfully submit that claim 8 is dependent upon claim 5 and that claim 5 recites an antibody that specifically immunoreacts with integrin $\alpha_{IIB}\beta_3$ and comprises an amino acid residue sequence selected from the group consisting of SEQ ID Nos: 8, 25, 26, 27, 28, 29, 30, and 31, wherein the amino acid residue sequence is within a complementarity determining region of the antibody. Applicants submit that the Specification discloses exemplary antibodies that specifically immunoreact with integrin $\alpha_{IIB}\beta_3$ and that comprise an amino acid residue sequence within a complementarity determining region of the antibody, the acid residue sequence selected from the group consisting of SEQ ID Nos: 8, 25, 26, 27, 28, 29, 30, and 31 as disclosed on Figure 3, Table 1, and in the specification at page 24 (last two paragraphs) through page 26.

Applicants submit that the recitation of the SEQ ID Nos as found in the Sequence Listing and that the antibody specifically immunoreacts with integrin $\alpha_{IIB}\beta_3$ renders the scope of the claim definite.

Applicants respectfully submit that since claim 8 is dependent upon claim 5, all the limitations of claim 5 are included in the scope of claim 8. In particular claim 8 also recites that the antibody has immunoreactivity with integrin $\alpha_{IIB}\beta_3$ and has a dissociation constant (K_d) from between 10^{-8} and 10^{-11} M. Applicants submit that the antibody of claim 8 has known characteristics, i.e., (1) “comprises an

amino acid residue sequence selected from the group consisting of SEQ ID Nos: 8, 25, 26, 27, 28, 29, 30, and 31, wherein the amino acid residue sequence is within a complementarity determining region of the antibody”, (2) “specifically immunoreacts with integrin $\alpha_{IIb}\beta_3$ ” and (3) “has a dissociation constant (K_d) from between 10^{-8} and 10^{-11} M”.

With regard to claim 10, Applicants respectfully submit that claim 8 recites that the antibody has a specificity (dissociation constant (K_d)) from between 10^{-8} and 10^{-11} M” and therefore dependent claim 10 is not indefinite.

Applicants submit that claim 8 as amended particularly points out and distinctly claims the subject matter.

In view of the amendments to claim 8, and the submissions above, Applicants respectfully request that the Examiner withdraw the rejections of claims 8 and 10 under 35 USC § 112, second paragraph.

3) The Examiner stated that claim 8 is rejected under 35 USC § 112, first paragraph, as containing subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains or with which it is most nearly connected to make/use the invention.

The Examiner stated that it was apparent that the hybridomas that produce the RAD3 RAD3, RAD4, RAD9, RAD11, RAD12, RAD32, RAD34, RAD87, or RAD88 antibodies to practice the claimed invention. As a required element, the Examiner continued, it must be known and readily available to the public or obtainable by a repeatable method set forth in the specification. The Examiner then stated that if it is not obtainable or available, the enablement requirement of 35 USC 112, a deposit of the hybridoma, which produces this antibody, must satisfy first paragraph. The Examiner continued that, if the deposits have been made under the terms of the Budapest Treaty, an affidavit or declaration by applicants or someone associated with the patent owner who is in a position to make such assurances, or a statement by an attorney of record over his or her signature, stating that the hybridoma has been deposited under the Budapest Treaty and that the hybridoma will be irrevocably and without restriction or condition released to the public upon issuance of a patent would satisfy the deposit requirement made herein.

Applicants have amended claim 8 to recite: “The antibody of claim 5 having immunoreactivity with integrin $\alpha_{IIB}\beta_3$ wherein the antibody has a dissociation constant (K_d) from between 10^{-9} and 10^{-10} M”.

Applicants submit that claim 8 recites subject matter that was described in the specification in such a way as to enable one skilled in the art to which it pertains or with which it is most nearly connected to make/use the invention.

In view of the amendments to claim 8, and the submissions above, Applicants respectfully request that the Examiner withdraw the rejections of claims 8 and 10 under 35 USC § 112, first paragraph.

4) The Examiner has rejected claims 5-10, 15-16, 22-23, 25-26, and 28-29 under 35 USC § 112, first paragraph, as failing to comply with the written description requirement. The Examiner stated that the claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The Examiner asserted that Applicant is in possession of an anti-integrin $\alpha_{IIB}\beta_3$ antibody comprising VH of SEQ ID NOs: 32-38 or RAD3 (VH SEQ ID NO: 36), RAD4, RAD9 (VH SEQ ID NO: 33), RAD11, RAD12 (VH SEQ ID NO: 34), RAD32 (VH SEQ ID NO: 35), RAD87 (VH SEQ ID NO: 32) and RAD88 (VH SEQ ID NO: 38), wherein the antibody comprises a heavy chain CDR3 motif Arg-Ala-Asp (RAD). The Examiner asserted that Applicant is not in possession of the protein in claims 5-10, 15-16, 22-23, 25-26, and 28-29.

Applicants submit that claim 5 recites an antibody comprising an amino acid residue sequence selected from the group consisting of SEQ ID Nos: 8, 25, 26, 27, 28, 29, 30, and 31. Applicants submit that the antibody specifically immunoreacts with integrin $\alpha_{IIB}\beta_3$. Applicants submit that such antibodies are disclosed in the specification at page 23, lines 25-31, at page 24, lines 17-27, at page 25, lines 3-21, at page 26, lines 33-35, at page 27, lines 1-18, Figure 1, Figure 5, and Table 3, where Applicants disclosed the antibody as claimed was specific for integrin $\alpha_{IIB}\beta_3$ and that cyclic linear peptides having identical sequences to the antibodies assayed had similar inhibitory activity, thereby confirming that the particular amino acid sequence was the active moiety in the immunoreaction between antibody and integrin $\alpha_{IIB}\beta_3$. The use of the specific inhibitory peptides indicates that the particular amino acid

sequence in the CDR3 region is involved with integrin $\alpha_{IIB}\beta_3$ binding and that the other CDRs, as suggested by the Examiner's reading of the prior art, do not need to be defined. The claimed invention overcomes the prior art problems and the improvements over the prior art are discussed in the specification at pages 27 through 31.

Applicants further disclosed on the Table at pages 12-13 that particular amino acid residues may be substituted and that these conservative substitutions are well known to those of skill in the art. Applicants further submit that generally such substitutions are considered by those of skill in the art do not result in a significant change in the chemical activity of the resulting peptide or protein. In particular the two basic amino acids arginine (Arg; R) and lysine (Lys; K) are well known to those of skill in the art to be equivalent substitutions.

Applicants respectfully note that the method for using either light chain or heavy chain immunoglobulins are disclosed in the specification at page 9, last paragraph where a phage display assay is disclosed. Methods in more detail are disclosed at page 10, first paragraph and at page 11, second paragraph where Applicants stated that "antibody molecules having identical, or functionally equivalent, amino acid residue sequences in their CDR regions have the same binding specificity". In addition, at page 10, third paragraph where Applicants specifically stated "it is also possible to determine, without undue experimentation, if a human monoclonal antibody has the same (i.e., equivalent) specificity as a human monoclonal antibody of this invention". As discussed above, the use of the specific inhibitory peptides indicates that the particular amino acid sequence in the CDR3 region is involved with integrin $\alpha_{IIB}\beta_3$ binding and that the other CDRs, as suggested by the Examiner's reading of the prior art, do not need to be defined. The claimed invention overcomes the prior art problems and the improvements over the prior art are discussed in the specification at pages 27 through 31.

Therefore, Applicants submit that the present application does describe in such a clear and sufficient manner as to enable those skilled in the art to practice the invention.

Applicants submit that the instant specification discloses all the limitations of the claims, a significant improvement over the prior art, and that the specification contains subject matter which was described

in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants respectfully submit that the amino acid residue sequence selected from the group consisting of SEQ ID Nos: 8, 25, 26, 27, 28, 29, 30, and 31 all comprise the tripeptide RAD, as disclosed in the Sequence Listing.

Applicants submit that claim 5 and dependent claims 6-10, 15-16, 22-23, 25-26, and 28-29 recite subject matter that was described in the specification in such a way as to enable one skilled in the art to which it pertains or with which it is most nearly connected to make/use the invention.

In view of the submissions above, Applicants respectfully request that the Examiner withdraw the rejections of claims 5-10, 15-16, 22-23, 25-26, and 28-29 under 35 USC § 112, first paragraph.

5) The Examiner has rejected claims 5-10, 15-16, 22-23, 25-26, and 28-29 under 35 USC § 112, first paragraph, because the specification, while being enabling for an anti-integrin $\alpha_{IIb}\beta_3$ antibody comprising VH of SEQ ID NOs: 32-38 or RAD3 (VH SEQ ID NO: 36), RAD4, RAD9 (VH SEQ ID NO: 33), RAD11, RAD12 (VH SEQ ID NO: 34), RAD32 (VH SEQ ID NO: 35), RAD87 (VH SEQ ID NO: 32) and RAD88 (VH SEQ ID NO: 38), wherein the antibody comprises a heavy chain CDR3 motif Arg-Ala-Asp (RAD), does not reasonably provide enablement for the antibodies claimed in claims 5-10, 15-16, 22-23, 25-26, and 28-29. The Examiner stated that the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the inventions commensurate in scope with these claims.

Also, the Examiner continued, at issue is whether or not the claimed composition in claims 22-23 would function as a pharmaceutical composition. The Examiner then stated that, in view of the absence of a specific and detailed description in Applicant's specification of how effectively use the pharmaceutical composition is claimed, and absence of working example providing evidence which is reasonably predictive that the claimed pharmaceutical composition are effective for in vivo use, and the lack of predictability in the art at the time the invention was made, an undue amount of experimentation would be required to practice the claimed pharmaceutical composition with a reasonable expectation of success.

Applicants note that the first sentence of the Background of the Invention recites “integrin $\alpha_{IIB}\beta_3$ inhibitors are new class of antithrombotic agents that block fibrinogen binding to the platelet integrin $\alpha_{IIB}\beta_3$, thereby inhibiting platelet-platelet interactions essential for the formation of platelet thrombi” (see page 1, lines 7-9). Applicants therefore submit that inhibition of fibrinogen binding to platelet integrin $\alpha_{IIB}\beta_3$ is well known by those of skill in the art to block and treat thrombus formation (thrombosis).

Furthermore, applicants particularly disclosed that antibodies and antibody Fab fragments can be used to *in vivo* or *in vitro* modulate the function of integrin $\alpha_{IIB}\beta_3$ on platelets (page 16, lines 12-14 and 29-30), is capable of inhibiting the aggregation of platelets, and thereby decreasing the rate of thrombus formation (page 16, lines 17-18 and 30-31), and pages 16-18 throughout. Applicants respectfully submit that such experiments clearly may be used by those of skill in the art to predict how the antibody can be used to treat formation of thrombi *in vivo*. Applicants submit that such experiments are commonly used to determine the potential formation of thrombi in clinical samples and therefore one of skill in the relevant art would appreciate that such results are of objective clinical relevance.

Applicants submit that claim 5 recites an antibody comprising an amino acid residue sequence selected from the group consisting of SEQ ID Nos: 8, 25, 26, 27, 28, 29, 30, and 31. Applicants submit that the antibody specifically immunoreacts with integrin $\alpha_{IIB}\beta_3$. Applicants submit that such antibodies are disclosed in the specification at page 23, lines 25-31, at page 24, lines 17-27, at page 25, lines 3-21, at page 26, lines 33-35, at page 27, lines 1-18, Figure 1, Figure 5, and Table 3, where Applicants disclosed the antibody as claimed was specific for integrin $\alpha_{IIB}\beta_3$ and that cyclic linear peptides having identical sequences to the antibodies assayed had similar inhibitory activity, thereby confirming that the particular amino acid sequence was the active moiety in the immunoreaction between antibody and integrin $\alpha_{IIB}\beta_3$. The use of the specific inhibitory peptides indicates that the particular amino acid sequence in the CDR3 region is involved with integrin $\alpha_{IIB}\beta_3$ binding and that the other CDRs, as suggested by the Examiner’s reading of the prior art, do not need to be defined. The claimed invention overcomes the prior art problems and the improvements over the prior art are discussed in the specification at pages 27 through 31.

Applicants further disclosed on the Table at pages 12-13 that particular amino acid residues may be substituted and that these conservative substitutions are well known to those of skill in the art. Applicants further submit that generally such substitutions are considered by those of skill in the art do not result in a significant change in the chemical activity of the resulting peptide or protein. In particular the two basic amino acids arginine (Arg; R) and lysine (Lys; K) are well known to those of skill in the art to be equivalent substitutions.

Applicants respectfully note that the method for using either light chain or heavy chain immunoglobulins are disclosed in the specification at page 9, last paragraph where a phage display assay is disclosed. Methods in more detail are disclosed at page 10, first paragraph and at page 11, second paragraph where Applicants stated that “antibody molecules having identical, or functionally equivalent, amino acid residue sequences in their CDR regions have the same binding specificity”. In addition, at page 10, third paragraph where Applicants specifically stated “it is also possible to determine, without undue experimentation, if a human monoclonal antibody has the same (i.e., equivalent) specificity as a human monoclonal antibody of this invention”. Therefore, Applicants submit that the present application does describe in such a clear and sufficient manner as to enable those skilled in the art to practice the invention.

Applicants submit that the instant specification discloses and teaches all the limitations of the claims, a significant improvement over the prior art, and that the specification enables any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the inventions commensurate in scope with these claims.

In view of the submissions above, Applicants respectfully request that the Examiner withdraw the rejections of claims 5-10, 15-16, 22-23, 25-26, and 28-29 under 35 USC § 112, first paragraph.

Claim Rejections under 35 USC § 102

6) The Examiner has rejected claims 10, 15-16, 23, 26, and 29 under 35 USC § 102(e) as being anticipated by US Patent No. 7,812,136 B2.

The Examiner stated that the ‘136 patent teaches and claims an Antibody of human origin, wherein said antibody inhibits platelet aggregation and has a greater binding affinity to the activated state of platelet

integrin receptor GPIIb/IIIa than to the inactive conformation of the platelet integrin receptor GPIIb/IIIa, wherein the antibody comprises the heavy and light chain domains of the amino acid sequence of SEQ ID NO: 159. The Examiner stated that the '136 patent teaches a pharmaceutical composition containing the antibody.

In order to advance prosecution, Applicants have reproduced part of Figure 22 (SEQ ID NO: 139) of the '136 Patent herewith:

MB9 scFv Translation recombinant human antibody fragment

```

MAEVQLVQSG AEVNKPGASV KVSCKASGYT FTGYIMHWVR QAPGQGLEWM GWINPNSGGT      60
NYAQRFGQGV..TMTRDTSIST AYMELSRRLRS DDTAVYYCAR GRALYNRNDR SPNWFDPWGQ...120..
GTLVTVSSGS ASAPTLKLEE GEFSEARVQA VLTQPPSVSV APGQTARITC GGNNIGSKSV      180
QWYQQKPGQA PVLVVYDDSD RPSGIPERFS GSNSGNMATL TISRVEAGDE ADYYCQVWDS      240
SSDHVVFEGG TKLTVLGQPK AAPSVTLFPP SAAAGSHHHH HH                          282

```

Applicants also have reproduced the amino acid residue sequences of claimed SEQ ID NOs: 8, 25, 26, 27, 28, 29, 30, and 31:

```

SEQ ID NO: 8  Val Arg Val Val Cys Arg Ala Asp Arg Arg Cys Tyr Ala Met Asp Val
SEQ ID NO: 25 Val Arg Val Val Cys Arg Ala Asp Lys Arg Cys Tyr Ala Met Asp Val
SEQ ID NO: 26 Val Arg Val Trp Cys Arg Ala Asp Arg Arg Cys Tyr Ala Met Asp Val
SEQ ID NO: 27 Val Arg Val Trp Cys Arg Ala Asp Lys Arg Cys Tyr Ala Met Asp Val
SEQ ID NO: 28 Val Gly Val Val Cys Arg Ala Asp Arg Arg Cys Tyr Ala Met Asp Val
SEQ ID NO: 29 Val Gly Val Val Cys Arg Ala Asp Lys Arg Cys Tyr Ala Met Asp Val
SEQ ID NO: 30 Val Gly Val Trp Cys Arg Ala Asp Arg Arg Cys Tyr Ala Met Asp Val
SEQ ID NO: 31 Val Gly Val Trp Cys Arg Ala Asp Lys Arg Cys Tyr Ala Met Asp Val
                1              5              10              15

```

"Anticipation under 35 U.S.C. 102(b) requires the presence in a single prior art disclosure of each and every element of a claimed invention," *Lewmar Marine, Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 USPQ2d 1766, 1767 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988).

"A description in a prior publication, in order to defeat a patent, must contain and exhibit a substantial representation of the patented improvement in such full, clear and exact terms, as to enable any person skilled in the art or science to which it pertains, to make, construct, and practice the invention patented. It must be an account of a complete and operative invention, capable of being put into practical operation" *Seymore v. Osborne* 78 U.S. 516 (1870).

Applicants submit that careful examination of the peptide sequence of SEQ ID NO: 159 from the '136 patent does not disclose the tripeptide sequence RAD (Arg-Ala-Asp) nor do any of the claimed SEQ ID NOs: 8, 25, 26, 27, 28, 29, 30, and 31 as recited in independent claim 5, upon which claim 10 depends. In addition, the '139 patent does not teach nor suggest the amino acid sequences of SEQ ID NOs: 8, 25, 26, 27, 28, 29, 30, and 31.

Applicants respectfully submit that the prior art and the subject matter of the claims at issue are different and therefore that US Patent No. 7,812,136 B2 does not anticipate claims 10, 15-16, 23, 26, and 29.

In view of the submissions above, Applicants respectfully request that the Examiner withdraw the rejections of claims 10, 15-16, 23, 26, and 29 under 35 USC § 102(e).

7) The Examiner has rejected claim 10, 15-16, 23, 26, and 29 under 35 USC § 102(b) as being anticipated by Quinn et al. (Circulation (1999) 99: 2231-2238).

The Examiner stated that Quinn et al. teach *in vitro* binding of monoclonal antibodies, LYP18 and F48 to the GPIIb/IIIa ($\alpha_{IIb}\beta_3$) complex, was characterized using purified receptor and to platelets by flow cytometry.

“Anticipation under 35 U.S.C. 102(b) requires the presence in a single prior art disclosure of each and every element of a claimed invention,” *Lewmar Marine, Inc. v. Barient, Inc.*, 827 F.2d 744, 747, 3 USPQ2d 1766, 1767 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988).

“A description in a prior publication, in order to defeat a patent, must contain and exhibit a substantial representation of the patented improvement in such full, clear and exact terms, as to enable any person skilled in the art or science to which it pertains, to make, construct, and practice the invention patented. It must be an account of a complete and operative invention, capable of being put into practical operation” *Seymore v. Osborne* 78 U.S. 516 (1870).

Applicants submit that Quinn et al. do not teach nor suggest an antibody comprising SEQ ID NOs: 8, 25, 26, 27, 28, 29, 30, and 31 as recited in base claim 1, upon which claim 10 depends. Applicants

respectfully submit that claim 10 has all the limitations of base claim 5 and the Examiner has not shown where Quinn et al. teach all the limitations of claim 5.

Applicants respectfully submit that the prior art and the subject matter of the claims at issue are different and therefore that Quinn et al. do not anticipate claims 10, 15-16, 23, 26, and 29.

In view of the submissions above, Applicants respectfully request that the Examiner withdraw the rejections of claims 10, 15-16, 23, 26, and 29 under 35 USC § 102(b).

CONCLUSION

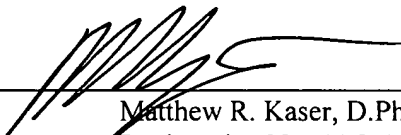
With these arguments, Applicants believe that the application is in condition for allowance. If the US Patent Office believes that communication would further the prosecution of this application, then the appropriate US Patent Office personnel are invited to contact the Applicants' below-signed representative at their earliest convenience.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to **Bell & Associates Deposit Account No. 50-3194**.

Respectfully submitted,

Date: 8th July, 2011

By: _____



Matthew R. Kaser, D.Phil.

Registration No. 44,817

Direct Telephone: (510) 537-2040